

CLAIMS AMENDMENTS

Claim 9 (previously presented): A method for delivering oligonucleotide-stabilized lactone forms of camptothecin drugs to a host comprising the steps of: providing an oligonucleotide-camptothecin drug complex as a delivery vehicle wherein said camptothecin drug contains at least one lactone ring, and said oligonucleotide is capable of associating with said camptothecin drug so that at least some part of the lactone ring is associated with said oligonucleotide and thereby protected from hydrolysis; and administering the oligonucleotide-camptothecin drug complex to the host.

Claim 10 (currently amended): A method of treating a patient with a chemotherapeutic composition, comprising:

administering an oligonucleotide-camptothecin drug complex which incorporates sufficient amounts of active lactone camptothecin drug to exert therapeutic activity when administered to the body, wherein at least a part of the camptothecin drug lactone ring is associated with said oligonucleotide and thereby protected from hydrolysis during administration, and wherein the camptothecin drug dissociates from the oligonucleotide within the body and exerts its therapeutic activities.

Claim 11 (currently amended): The method of claim 10, wherein the camptothecin drug is selected from a group consisting of camptothecin; 10-hydroxycamptothecin; topotecan; 9-aminocamptothecin; 9-nitrocamptothecin; 10-hydroxycamptothecin; 10,11-methylenedioxycamptothecin; 9-nitro-10,11-methylenedioxy-camptothecin; 9-chloro-10,11-methylenedioxycamptothecin; 9-amino-10,11-methylenedioxycamptothecin; 7-ethyl-10-hydroxycamptothecin (SN-38); DX-8951; GG211; 7-trimethylsilylmethylcamptothecin; and mixtures thereof.

Claim 12 (previously presented): The method of claim 10, wherein the oligonucleotide is selected from the group consisting of single-stranded DNA, double-stranded DNA, antisense DNA, RNA, and catalytic RNA.

Claim 13 (previously presented): The method of claim 10, wherein said camptothecin drug is noncovalently associated with the DNA and naturally dissociates in the body to release the active lactone form of the drug.

Claim 14 (previously presented): The method of claim 10, wherein said camptothecin drug is covalently tethered to the oligonucleotide molecule and can be metabolically released from the oligonucleotide within the body.

Claim 15 (previously presented): The method of claim 10, wherein said oligonucleotide-camptothecin drug complex is held within macromolecular assemblies of viral oligonucleotide vectors having a viral gene delivery system including retroviruses, adenoviruses, adeno-associated viruses, *Herpes* viruses, *Vaccinia* viruses, and other virus particles.

Claim 16 (previously presented): The method of claim 10, wherein said oligonucleotide-camptothecin drug complex is held within macromolecular assemblies of non-viral oligonucleotide vectors having a non-viral gene delivery system including transfection vehicles, naked DNA for injection, gene gun particles, liposomes including cationic liposomes, virosomes, receptor-mediated delivery vehicles, and biodegradable and non-biodegradable polymer matrixes.

Claim 17 (previously presented): The method of claim 10, further including lipid so as to form a lipid:oligonucleotide-camptothecin drug complex from a surfactant, lipid or mixture thereof, said lipid defining a compartment wherein said oligonucleotide-camptothecin drug complex exists and the camptothecin drug is held and protected from hydrolysis and is thus stabilized.

Claim 18 (currently amended): A chemotherapeutic composition, comprising an

oligonucleotide-camptothecin drug complex including a pharmaceutically effective amount of active lactone camptothecin drug that whereby at least a part of the camptothecin drug lactone ring is associated with said oligonucleotide and thereby protected from hydrolysis during administration, and wherein the camptothecin drug dissociates from the oligonucleotide within the body and exerts therapeutic activity.

Claim 19 (previously presented): The chemical composition of claim 18, wherein the camptothecin drug is selected from a group consisting of camptothecin; 10-hydroxycamptothecin; topotecan; 9-aminocamptothecin; 9-nitrocamptothecin; 10-hydroxycamptothecin; 10,11-methylenedioxycamptothecin; 9-nitro-10,11-methylenedioxy-camptothecin; 9-chloro-10,11-methylenedioxycamptothecin; 9-amino-10,11-methylenedioxycamptothecin; 7-ethyl-10-hydroxycamptothecin (SN-38); DX-8951; GG211; 7-trimethylsilylmethylcamptothecin; and mixtures thereof.

Claim 20 (previously presented): The composition of claim 18 wherein the oligonucleotide is selected from the group consisting of single-stranded DNA, double-stranded DNA, antisense DNA, RNA, and catalytic RNA.

Claim 21 (previously presented): The composition of claim 18 wherein said camptothecin drug is noncovalently associated with the DNA and naturally dissociates

in the body to release the active lactone form of the drug.

Claim 22 (previously presented): The composition of claim 18 wherein said camptothecin drug is covalently tethered to the oligonucleotide molecule and can be metabolically released from the oligonucleotide within the body.

Claim 23 (previously presented): The composition of claim 18 wherein said oligonucleotide-camptothecin drug complex is held within macromolecular assemblies of viral oligonucleotide vectors having a viral gene delivery system including retroviruses, adenoviruses, adeno-associated viruses, *Herpes* viruses, *Vaccinia* viruses, and other virus particles.

Claim 24 (previously presented): The composition of claim 18, wherein said oligonucleotide-camptothecin drug complex is held within macromolecular assemblies of non-viral oligonucleotide vectors having a non-viral gene delivery system including transfection vehicles, naked DNA for injection, gene gun particles, liposomes including cationic liposomes, virosomes, receptor-mediated delivery vehicles, and biodegradable and non-biodegradable polymer matrixes.

Claim 25 (previously presented): The composition of claim 18 further including

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lipid so as to form a lipid:oligonucleotide-camptothecin drug complex from a surfactant, lipid or mixture thereof, said lipid defining a compartment wherein said oligonucleotide-camptothecin drug complex exists and the camptothecin drug is held and protected from hydrolysis and is thus stabilized.